What is claimed is:

1. An optical filter comprising a dielectric reflective layer capable of reflecting a predetermined proportion of light in a specific wavelength region while transmitting a predetermined proportion of light in the visible region, the dielectric reflective layer comprising a first set of dielectric reflective layer units, constituted by a plurality of layers each formed of a first polymer, in combination with a second set of dielectric reflective layer units constituted by a plurality of layers each formed of a second polymer having a refractive index different from the first polymer, the first and second sets of dielectric reflective layer units being combined by alternately stacking the first polymer layers and second polymer layers, the dielectric reflective layer having a reflectance of not less than 70% of the light to be reflected and a transmittance of not less than 60% of light in the three primary color regions of the visible spectrum, including a blue region (wavelength; 430-490 nm), a green region (wavelength; 515575 nm), and a red region (wavelength; 580-640 nm).

2. The optical filter according to claim 1, wherein at least one of the first and second sets of dielectric reflective layer units include a quarterwavelength layer, with the product of the thickness (d in m) by the refractive index (n) of the polymer, i.e., n x d, being one-fourth the wavelength of light to be reflected.

3. The optical filter according to claim 2, wherein the product (n x d) in the quarter-wavelength layer is in the range of from 200 to 250 nm and the light reflectance in a wavelength region of from 800 to 1,000 nm is not less than 70%.

4. The optical filter according to claim 1, further comprising a resin layer disposed to face at least one surface of the dielectric reflective layer, the resin of the layer containing a fluorine polymer.

5. The optical filter according to claim 4, wherein the product of the thickness (d in nm) of the resin layer by the refractive index (n) of the resin, i.e., n x d, is one-fourth of the wavelength of visible light, which can transmit though the dielectric reflective layer.

Add New Claims